



[illegible][illegible]



FIG. 3-2

|       |     |      |     |     |    |      |     |     |     |     |   |    |    |     |     |    |    |   |    |      |      |     |     |     |
|-------|-----|------|-----|-----|----|------|-----|-----|-----|-----|---|----|----|-----|-----|----|----|---|----|------|------|-----|-----|-----|
| CatE  | ... | EGLT | V   | VGQ | Q  | FGES | VT  | EPG | Q   | T   | F | VD | AE | FDG | IL  | GL | Q  | Y | P  | SLA  | ..   | 193 |     |     |
| PapA  | ... | GGIS | D   | TN  | CI | FGL  | SET | EPG | S   | F   | F | Y  | Y  | AP  | FDG | IL | GL | Q | Y  | SIS  | ..   | 191 |     |     |
| PapC  | ... | Q    | IQ  | V   | PN | CE   | FGL | SET | EPG | S   | F | Y  | Y  | AP  | FDG | IL | GL | Q | Y  | ARIS | ..   | 188 |     |     |
| CatD  | SAS | AL   | GG  | V   | ER | Q    | FGL | SET | EPG | T   | F | I  | A  | AK  | FDG | IL | GL | Q | Y  | ALIS | ..   | 207 |     |     |
| Renin | ... | GGIT | V   | T   | Q  | MF   | FGE | VT  | M   | F   | L | P  | E  | E   | FDG | IL | GL | Q | Y  | EQA  | ..   | 202 |     |     |
| CSP56 | SFL | VNI  | AT  | IF  | ES | NE   | F   | ... | ... | ... | F | P  | G  | IK  | FDG | IL | GL | Q | Y  | T    | LAKP | 207 |     |     |
| CatE  | VG  | GV   | T   | P   | V  | F    | D   | N   | M   | M   | A | Q  | N  | L   | V   | D  | L  | P | M  | F    | S    | V   | 233 |     |
| PapA  | SS  | GA   | T   | P   | V  | F    | D   | N   | I   | W   | N | Q  | G  | L   | V   | S  | Q  | D | L  | F    | S    | V   | 229 |     |
| PapC  | VDE | AT   | T   | A   | GG | H    | V   | Q   | Q   | G   | L | V  | N  | Q   | L   | S  | .. | A | .. | Q    | S    | ..  | 227 |     |
| CatD  | VN  | AV   | L   | P   | V  | F    | D   | N   | L   | M   | Q | Q  | K  | L   | V   | D  | Q  | N | I  | F    | S    | V   | 247 |     |
| Renin | IG  | R    | V   | T   | E  | I    | F   | D   | H   | I   | I | S  | Q  | G   | V   | L  | K  | E | D  | V    | F    | S   | 244 |     |
| CSP56 | S   | S    | S   | L   | E  | T    | F   | F   | E   | S   | L | V  | T  | O   | A   | N  | I  | P | .. | N    | V    | F   | S   | 251 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   | 272 |
| CatD  | GG  | S    | D   | S   | K  | Y    | V   | K   | G   | S   | L | S  | Y  | L   | N   | W  | T  | R | K  | A    | Y    | N   | Q   | 291 |
| Renin | GG  | S    | D   | P   | O  | H    | Y   | E   | G   | D   | I | W  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 288 |
| CSP56 | GG  | I    | ... | P   | S  | L    | V   | K   | G   | N   | F | H  | Y  | T   | P   | K  | E  | E | W  | I    | Q    | I   | A   | 296 |
| CatE  | GG  | Y    | D   | H   | S  | H    | S   | G   | S   | L   | N | W  | V  | P   | V   | T  | K  | Q | A  | Y    | N    | Q   | I   | 277 |
| PapA  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | G    | Y   | N   | 273 |
| PapC  | GG  | V    | D   | S   | S  | S    | L   | V   | T   | G   | Q | I  | Y  | W   | A   | P  | V  | T | Q  | E    | L    | Y   | N   |     |

**FIG. 3-3**

[illegible]